

REMARK

Applicant respectfully requests reconsideration of this application as amended. No claims have been amended. Claims 34 and 40 have been cancelled. Claim 1 has been allowed by the Examiner. Therefore, 22-33, 35-39, and 41-49 are present for examination.

35 U.S.C. §103 Rejections

Murakami et al in view of Barberis et al. and Parish et al.

The Examiner has rejected claims 22-28, 31, 32, 35, 38, 39, and 41-49 under 35 U.S.C. §103(a) as being unpatentable over Murakami et al. (U.S. Patent No. 5,010,401) in view of Barberis et al. (U.S. Patent No. 4,320,500) and Parish et al. (U.S. Patent No. 5,117,350).

Murakami discloses an interframe video data coding and decoding apparatus that utilizes a differential amplitude suppression circuit in combination with a block encoder and a motion detector to non-linearly suppress amplitude values of interframe differential block data based on a motion detection threshold value determined by an encoding circuit.

Barberis discloses a system for routing data by utilizing path delays assigned to routes from transmitting buffers to terminal nodes.

Parish discloses a computer system having a distributed memory architecture using an apparatus to connect memory units in order to facilitate software control of the storage and retrieval of data in a distributed architecture.

Independent Claims 22, 24, 35, 39, 42, 44, and 46

With respect to independent claims 22, 24, 35, 39, 42, 44, and 46 the Examiner stated that while Murakami does not disclose “dynamically created output buffers that are created and configured based upon one or more characteristics of a communication channel to be used for transmitting the encoded real time information over a network”, that such a concept is “old and well recognized in the art, as exemplified by Barberis et al (see column 4, lines 20-63).” The Examiner further stated that because of Barberis, it is “considered obvious that such buffer selections based on network characteristics of Barberis et al may be provided in place of the output buffer configuration of Murakami et al so that network requirements are met.”

The Applicant respectfully disagrees with the Examiner’s characterization of Barberis. As noted above, Barberis discloses a system for routing data from a transmitting buffer to a terminal node according to the delay that is computed for various paths to the terminal node. In Barberis, B_1 - B_n are transmitting nodes, corresponding to “dynamically created output buffers” of the Applicants’ invention as recited by the claims; W_1 - W_n are terminal nodes that correspond to transmitting nodes B_1 - B_n , and that receive data transmitted from nodes B_1 - B_n ; and Y_1 - Y_n are intermediate nodes that correspond to transmitting nodes B_1 - B_n , and that relay data to W_1 - W_n that are transmitted from nodes B_1 - B_n . In Barberis, each of buffers B_1 - B_n is predefined based on the number of terminal nodes in the system.

In Barberis, a route comprises a transmitting node B_i , a terminal node W_i , and any intermediate nodes, Y_i , where i is a member of $1-n$, and denotes some identifiable path shared by each of B_i , W_i , and Y_i . Data is transmitted along a route consisting of a transmitting node, B_1-B_n , a terminal node W_1-W_n , and intermediate nodes, Y_1-Y_n , if any, where the route is the route that has a calculated delay that is less than a calculated delay of some other path. In other words, "a packet destined for terminal node W_2 (see FIG. 1A) may be routed ... over node Y_1 rather than over node Y_2 because the delay projected for transmission over buffer B_1 and nodes Y_1 , W_1 could be less than the delay calculated for transmission over buffer B_2 and Y_2 ." (See column 4, lines 49-55.) In Barberis, data is transferred from a receiving buffer BN to a single outgoing buffer, B_1-B_n , that is "selected to minimize the total delay experienced by the packet during transmission via the selected buffer and the path extending therefrom..." (column 4, lines 44-47).

The Applicant's invention as recited by the claims (hereinafter referred to as "Kuzma") differs from Barberis in many respects. First, Kuzma creates dynamically created buffers. This is in contrast to Barberis, where the buffers B_1-B_n are all predefined based upon the number of terminal nodes in the system.

Secondly, Kuzma requires that data is transferred to all of the buffers, rather than just a single buffer as in Barberis. In Kuzma, all of the dynamically created buffers are populated with an "an original temporal video reference", and each of the buffers has "different subsequent temporal video images." (Kuzma, column 5, lines 34-35).

Thirdly, in Kuzma, buffers are dynamically created according to one or more characteristics of a communications channel to be used for transmitting the data. Since the buffers are created according to characteristics of a communications channel, and the characteristics of a communications channel may change, each of the buffers may contain different data. In Barberis, not only is only one buffer populated (that which corresponds to a route having the shortest delay to the terminal node), but the existence of a given buffer in Barberis does not depend on the characteristics of its associated path (i.e., communication channel of Kuzma).

In summary, Barberis does not teach, as suggested by the Examiner, dynamically created buffers that are created and configured based upon one or more characteristics of a communication channel to be used for transmitting the data.

Furthermore, Barberis does not suggest or provide motivation for creating dynamically configurable buffers. In Barberis, since there are multiple paths (i.e., communication channels) for transmitting data, each path possibly having different calculated delays, there is no need in Barberis for additionally creating buffers that are dependent upon the characteristics of the communications channel. In Barberis, data is transmitted along a selected path, whereas in Kuzma, data is transmitted from a selected output buffer.

Furthermore, Parish does not teach or suggest dynamically configurable output buffers based on the characteristics of a communications channel. While

configurable memories may be well known in the art, the Applicant does not herein claim to have invented configurable memories. The Applicant specifically claims dynamically configurable output buffers that are based upon characteristics of a communications channel. Parish does not teach, suggest, or provide the motivation for modifying its disclosure of configurable memories to create dynamically configurable output buffers that are based upon characteristics of a communications channel.

As such, the combination of Murakami, Barberis, and Parish is improper, and even if proper, cannot be combined to form the Applicant's invention as recited by the claims. Therefore, the Applicant respectfully requests that the Examiner's rejection of independent claims 22, 24, 35, 39, 42, 44, and 46 be withdrawn, and allowed.

Dependent Claims 23, 25-28, 31-32, 38, 41, 43, 45, 47-49

Since each of these claims depends, directly or indirectly, from independent claims 22, 24, 35, 39, 42, 44, and 46, and inherits the limitations of their respective independent claims, and further add limitations; and since it is believed that the rejection to independent claims 22, 24, 35, 39, 42, 44, and 46 has been overcome, it is also believed that rejections to claims 23, 25-28, 31-32, 38, 41, 43, 45, and 47-49 have also been overcome. As such, the Applicant respectfully requests that the Examiner withdrawn his rejection of these claims and allow them.

35 U.S.C. §103 Rejections

Murakami et al in view of Barberis et al. and Parish et al. and in further view of Jeong

The Examiner has rejected claims 33 and 36 under 35 U.S.C. §103(a) as being unpatentable over Murakami et al. (U.S. Patent No. 5,010,401) in view of Barberis et al. (U.S. Patent No. 4,320,500) and Parish et al. (U.S. Patent No. 5,117,350) as applied to claims 22-28, 31, 32, 35, 38, and 41-49 in the above paragraph (3), and further in view of Jeong (U.S. Patent No. 5,497,153).

Jeong discloses a system for variable length coding and variable length decoding for improving data compression.

Since each of these claims depends, directly or indirectly, from independent claims 22, 24, 35, 39, 42, 44, and 46, and inherits the limitations of their respective independent claims, and further add limitations; and since it is believed that the rejection to independent claims 22, 24, 35, 39, 42, 44, and 46 has been overcome, it is also believed that rejections to claims 33 and 36 have also been overcome. Furthermore, Jeong does not teach or disclose, at the least, "dynamically configurable output buffers based on characteristics of a communications channel"; and Jeong does not teach or disclose what is missing from the other references, and therefore cannot be combined with the other references to form the Applicant's invention as recited by the claims.

As such, the Applicant respectfully requests that the Examiner withdrawn his rejection of these claims and allow them.

35 U.S.C. §103 Rejections

Murakami et al in view of Barberis et al. and Parish et al., and further in view of Khalil

The Examiner has rejected claims 29, 30, and 37 under 35 U.S.C. §103(a) as being unpatentable over the combination of Murakami et al. (U.S. Patent No. 5,010,401), Barberis et al. (U.S. Patent No. 4,320,500), Parish et al. (U.S. Patent No. 5,117,350), and further in view of Khalil of record (5,343,465).

Khalil discloses a system for analyzing the burstiness of network traffic.

Since each of these claims depends, directly or indirectly, from independent claims 22, 24, 35, 39, 42, 44, and 46, and inherits the limitations of their respective independent claims, and further add limitations; and since it is believed that the rejection to independent claims 22, 24, 35, 39, 42, 44, and 46 has been overcome, it is also believed that rejections to claims 29, 30, and 37 have also been overcome. Furthermore, Khalil does not teach or disclose, at the least, "dynamically configurable output buffers based on characteristics of a communications channel"; and Khalil does not teach or disclose what is missing from the other references, and therefore cannot be combined with the other references to form the Applicant's invention as recited by the claims.

As such, the Applicant respectfully requests that the Examiner withdrawn his rejection of these claims and allow them.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendment and remark, and that the claims are in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the claims be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

The Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17 for such an extension.

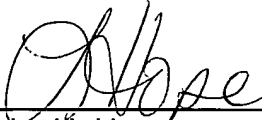
Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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Date: April 3, 2002



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AMENDMENT

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Marked Up Version Showing Changes Made

In the claims:

Please cancel claims 34 and 40.